



March 2025

THE BIG ISLAND HAMGRAM

The newsletter of the Big Island Amateur Radio Club

Update for future activations of ACS by Civil Defense

Here is the latest information regarding future activations of the ACS (Auxiliary Communications System) by Civil Defense.

Unless things change, any future "net control operator" will be doing a controlled net on the Mauna Kea repeater at 146.82.

They will also be monitoring 146.760 on VHF and 7.190 LSB on HF. In the event 40 meters closes out we will shift to 3.888 LSB.

If there are any changes to this, we will get it published.

Also, you can report directly to the Civil Defense via the internet, if that is available, as follows:

- 1) Go to County of Hawaii website
- 2) Then go to "Department"
- 3) Then click on Civil Defense
- 4) In the top left bar you will see "Disaster Recovery"
- 5) Click on that and fill out the appropriate form. If you are reporting for someone else please include "your call sign" in comments to better assist in locating and confirming the validity of the report.

I recommend you go to the site and fill out a few practice forms instead of waiting until an emergency arises.

Aloha,
Jim Tatar, WH6EMN

Hams needed for Hilo marathon comms

Any BIARC members who are interested in being on the Public Service Communications Committee are invited to contact Chair Les Hittner, K0BAD.

The next opportunity to provide public assistance is the Big Island International Marathon on Sunday, March 16.

"If you are interested in helping out

Continued on next page



David Miller, KH6CZ, snapped this photo at the February Kaumana Elementary Science Night. He thinks the lucky shot "captured the spirit of the event." BIARC volunteers included Joseph Rosenbaum, WH6JOE, at left; Fred Fischer, WH6HAA, at right; Jim Tatar, WH6EMN, offscreen, right.

Hamming it up at Kaumana El Science Night

Volunteers with the BIARC Education and Outreach Committee are keeping busy with their commitment to spread the message of ham radio throughout our island's younger generation via regular events in cooperation with the sponsoring Hawaii Science and Technology Museum.

"Just wanted to thank all of you for putting together another fun science night for the kids and families of Kaumana Elementary School," said the science museum's educational outreach coordinator, Jadee Takayesu, in a letter to all of the community entities

that make the events a success.

The most-recent school event, the Kaumana Elementary Science Night in early February, drew a total attendance of 143 for the evening program.

"Thanks again," she said. "Appreciate you all!"

"Thanks for the feedback, Jadee. We had fun with the kids and had very good interactions with the parents," said David Miller, KH6CZ, chair of the BIARC E&O Committee. "Each event gets better and better."

Next up on the science museum schedule:

Hilo Union Elementary
5th & 6th graders
Date: Friday, March 7
Time: 9:30-11:30 a.m.

See full E&O Committee reports on Pages 7-8

U.S. senators, reps re-introduce legislation to allow amateur radio antennas despite HOA rules

WASHINGTON – U.S. Senators Roger Wicker, R-Miss., and Richard Blumenthal, D-Conn., and Representatives August Pfluger, R-Tex., and Joe Courtney, D-Conn. announced their joint re-introduction of legislation in the Senate and House to restore the right to amateur radio operators to install the antennas necessary to serve their communities.

Home owners' association rules often prevent amateur radio operators from installing antennas at their homes even though amateur radio has proven to be essential in emergencies and natural disasters such as hurricanes when other means of communication fail, noted officials of the American Radio Relay League, or ARRL.

BIARC to work Hilo marathon comms

From previous page

with the marathon, please also let me know," said Les. (lhittner@hbc.com)

"We will need VHF/UHF operators, and APRS and Meshtastic resources including a large-screen TV readout. Operational times are from 5:45 am to 1:30 pm.

"Please let me know your available time(s) and the equipment you can donate to the effort," he said.

Announcements

Registration begins mid-March for the 24th USA National Radio-Orienteeing Championships. This year's event takes place June 18 - 22 in the Uwharrie Mountains of North Carolina and will be hosted by the [Backwoods Orienteering Klub](#) (BOK) at Morrow Mountain State Park. Radio-orienteeers from across the country plus visitors from abroad are expected to attend. The on-foot transmitter-hunting championships begin Wednesday, June 18, with model events on two meters and 80 meters. Thursday morning is the sprint, Friday is foxoring (a mix of foxhunting and orienteeing), Saturday is the two-meter classic, and Sunday is the 80-meter classic. USA's ARDF Championships are open to anyone of any age who can safely navigate in the woods with hand-held radio gear for several kilometers. An amateur radio license is not a requirement. Medals are awarded for each event in each of the [IARU age/gender categories](#). Winners of these championships will be under consideration for membership in ARDF Team USA, which will travel to future international competitions. The name Radio Orienteering has been around for a very long time and has frequently been applied to the sport of Amateur Radio Direction Finding (ARDF). It hasn't been recognized in any official sense. However, because Radio Orienteering is more descriptive of the sport (especially to the orienteeing community), and because Amateur Radio Direction Finding is often confused with other radio direction-finding activities (like mobile t-hunting), the [ARRL ARDF Committee](#) has decided to officially favor the use of the term Radio Orienteering, even renaming itself as the ARRL Radio Orienteering Committee.

BIARC Executive Board — 2025

Thomas Avila, KH6GG, was re-elected club president at the January BIARC Executive Board meeting. Others on the 2025 leadership team are Vice President David Miller, KH6CZ, Secretary Joseph Rosenbaum, WH6JOE, and Treasurer Tony Kitchen, WH6DVI.

The seven-member board also includes two at-large directors, Mark Watanabe, WH6FSA, and Shawn Farley, WH6GXZ, and our KH6EJ station trustee, William Polhemus, NH6ET.

Members of the club are encouraged to get involved at a committee level on one or more of the BIARC standing committees. There are many ways to help, and the committee activities vary widely.

As NH6ET noted, the committee level is where things happen. And the committees need "boots on the ground." So, if you see a committee focus that interests you, hop aboard.

Here are the committees:

Public Service/

Communications: Chair Les Hittner, K0BAD.

Operating Activities: Chair Joseph Rosenbaum, WH6JOE.

Education and Outreach: Chair David Miller, KH6CZ

Programs: Chair William Polhemus, NH6ET

Digital Systems: Chair Luke McKay, WH6GRW

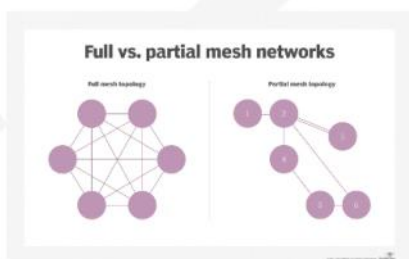
Voice Repeaters: Chair Trevor Manago, KH6IM

Meeting refreshments: Chair Jim Tatar, WH6EMN

The BIARC board meets at noon on the second Sunday of each month, followed by the 2 p.m. monthly membership program, at Kamana Senior Center in Hilo. All members are welcome at both sessions, and the meetings are accessible live via the Internet. Find the links on our website, [biarc.net](#).

Feb 16, 2025 BIARC Meeting

What is Meshtastic?



<https://www.techtarget.com/iotagenda/definition/mesh-network-topology-mesh-network>

Luke McKay (Presenting)

What is Meshtastic?

meshtastic.org:

"Meshtastic® is a project that enables you to use inexpensive LoRa radios as a long range off-grid communication platform in areas without existing or reliable communications infrastructure. This project is 100% community driven and open source!"

* Long range: decoding of messages down to -20dB SNR

* Off-grid: no reliance on Internet or utility power

* Inexpensive: DIY nodes from \$15 or less, pre-built with enclosures starting ~ \$40

* Part 15 ISM-band for license-free operation in US, 868MHz and 433MHz options in other areas, 2.4GHz options (lower range, higher bandwidth) almost world-wide

* Automatic mesh with simple managed flood routing; medium-sized networks "just work"

Demo and training for Meshtastic™

Luke McKay, WH6GRW, Shawn Farley, WH6GXZ, Gary Schwiter, WH6EPS, and others

<https://meshtastic.org>

Hop on the bandwagon!

Enthusiasm is growing quickly for Meshtastic and its capabilities, now and in the future, for simple, light-weight portability — and strength in numbers as more and more nodes dot the virtual map landscape.

An amateur radio license is not required for basic Meshtastic use.

At the February club gathering, Luke McKay, WH6GRW, led the presentation and helped field questions and comments.

Hands-on learning was encouraged, using and observing equipment provided by members already active in this new genre of comms.

Workshops are being discussed. Talk is frequently heard on local nets, and the BIARC Discord link features past and present discussions and presentations on Meshtastic.

Log on to the official Meshtastic website: <https://meshtastic.org>

State of the Mesh

* Your map will vary!

* Internet (MQTT) may allow *all* mesh traffic to be uploaded anywhere unless specific settings are changed on your node

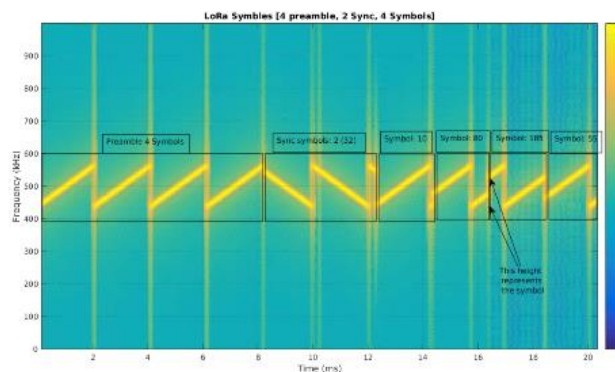
* Many nodes are on private "channels" and won't be visible on anyone's maps, unless you share that private channel

* Even more nodes are out there that don't have GPS (or hard-coded location). Locations can be spoofed, only trust locations from trusted nodes.

MESHTASTIC

An open source, off-grid, decentralized, mesh network built to run on affordable, low-power devices

How does it all work?



<http://www.sghosliya.com>

State of the Mesh – Hawai'i (±Internet)



hawaii.meshmap.ddns.net:8080 (WH6GXZ)

March 2025 Siren Report

From Darrell Asuka, KH6RDO, for the Big Island ARES Group

Location	Observer	Mode	Status	Notes
NOT WORKING				
Ainaloa (HA910)	WH6HAF	Allstar	Not Working	
Ainaloa (HA910)	WH6DVI	Mauna Kea	Not Working	
HOVE, #1 Leilani (HA805)	KH6FA	DMR	Not Working	
HOVE, #1 Leilani (HA805)	KH7MS	DMR	Not Working	
Kehana Beach (HA916)	KH6AQ	Text	Not Working	
Ookala (HA304)	WH6GDC	Allstar	Not Working	
PARTIALLY WORKING				
Kamehameha Park Kohala (HA503)	WH7WZ	Text	Partially Working	Ran for 24-26 sec
WORKING				
Ainako Park (HA117)	WH6FSA	Allstar	Working	
Banyan / Kam (HA104)	KH6ATU	Allstar	Working	
Captain Cook (HA702)	WH6WF	Text	Working	
Carvalho Park (HA114)	NH6WT	DMR	Working	
Cooper Center Volcano (HA936)	KH7DQ	Mauna Kea	Working	
Hakalau (HA113)	WH6ECX	Email	Working	
Hawaiian Beaches Park #1 (HA907)	KH7LM	Mauna Kea	Working	
Honoapu (HA802)	WH6HC	DMR	Working	
Honolulu (HA111)	KH6RDO	Allstar	Working	
HOVE Reef Blvd #3 (HA809)	WH6FC	DMR	Working	
HOVE Reef Blvd #3 (HA809)	WH6EPH	DMR	Working	
HOVE Reef Blvd #3 (HA809)	WH6HCF	DMR	Working	
HPP #1 Paradise / Ala Kai (HA925)	KH6CZ	Mauna Kea	Working	
HPP #2 4th & Awapuhi (HA912)	WH6HAA	Mauna Kea	Working	
HPP #3 6th & Makuu (HA913)	NH6OV	Mauna Kea	Working	
Kaunani School (HA125)	KH7BR	Email	Working	
Kawaihae Harbor (HA407)	WH6EHJ	Mauna Kea	Working	
Laupahoehoe Lookout (HA201)	WH6FSE	Allstar	Working	
Laupahoehoe Point (HA202)	WH6FSI	Allstar	Working	
Leilani Estates (HA915)	WH6EXM	Text	Working	
Lowe's Store Pepeekeo	KO6QT	Allstar	Working	
Naalehu (HA801)	WH6HC	DMR	Working	
NELHA Kona (HA611)	WH6GTD	Text	Working	
Pahala (HA804)	WH7BR	Allstar	Working	
Palani / Kuakini Kona (HA601)	NH6SP	Email	Working	
Puako General Store #1 (HA405)	WH6EHJ	Mauna Kea	Working	
State Building (HA116)	KI6HBZ	Email	Working	
Waa Waa (HA937)	NH7PE	Text	Working	
Waiaka Bridge Kamuela (HA402)	WH6EHJ	Mauna Kea	Working	
Waikamalo Park Ninole (HA123)	WH6FIQ	Text	Working	
Waimea Park Kamuela (HA401)	WH6EHJ	Mauna Kea	Working	
	WH6HAI	DMR	Nothing Heard	Waiohinu Transfer Station
Kings Landing (HA101A)	WH6FDE	Email	Working	
Lelewi (HA101)	WH6FDE	Email	Working	
Onakahakaha (HA103)	WH6FDE	Email	Working	
Kaimu Beach Kalapana (HA908)	KH6PGA	Allstar	Working	





The annual Hawaii Island International Hamfest was held on Saturday, February 15, at the Waimea Community Center, sponsored by the Kohala Hamakua Radio Club (KHRC).

Action shots shared with the Hamgram by photographer Gary Miller, KH6GM, and facilitated by Mel Uchida, KH6EKD.





What: Ham Radio Open House for World Amateur Radio Day 2025

Who: All amateur radio operators worldwide

When: WARD is Friday, April 18, 2025, at 0000 UTC until Saturday, April 19, 2025 at 0000 UTC but the Ham Radio Open House can be held any time in April, as works best for your local club.

Where: A global event covering all regions of the International Amateur Radio Union (IARU)

Why: World Amateur Radio Day, held on April 18 each year, is celebrated worldwide by radio amateurs and their national associations which are organized as member-societies of the International Amateur Radio Union (IARU). It was on this day in 1925 that the IARU was formed in Paris. American Radio Relay League (ARRL) Co-Founder Hiram Percy Maxim was its first president. A major theme for 2025 is celebrating 100 years of IARU.

How:

Get Ready for "Ham Radio Open House" for World Amateur Radio Day 2025

To help promote amateur radio science and technology, and to honor the 100th anniversary of the International Amateur Radio Union (IARU), ARRL is inviting radio clubs and schools to organize a Ham Radio Open House in April, centered around World Amateur Radio Day on April 18, 2025. The event is intended to highlight the Amateur Radio Service for its development and practice of the latest radio communications and technology, and as a hands-on pathway into science, technology, engineering, and mathematics (STEM) fields for the next generation. In April 2025, amateur radio clubs, school stations, and other groups will have the opportunity to advance public knowledge about ham radio by welcoming their communities into their stations for the Ham Radio Open House, around World Amateur Radio Day. The focus will be on scientific advancement and demonstrating cutting-edge technology. This is a chance to not only shape the conversation about modern ham radio but also to show how it serves as a steppingstone and testbed for many young people pursuing future STEM education and high-tech careers.

February BIARC Education & Outreach Committee

Executive Board Report – February 2025

Recent Activity

January 2	Siren Test Net supported on Mauna Kea Repeater/Allstar
January 12	BIARC Meetings
January 25	Winter Field Day participation
February 3	Siren Test Net supported on Mauna Kea Repeater/Allstar
February 5	Kaumana Elementary – Outreach Committee members on site: WH6HAA, WH6EMN, WH6JOE, KH6CZ, on Kulani: WH6LC

Planned Activity

February 16	BIARC Meetings
February 19	VOAD Meeting over Zoom
March 3	Siren Test Net
March 7	Hilo Union Elementary – Outreach Committee on site

Future

Reach out to East Hawaii schools for event participation with senior students.

Integrate Video Display and Programming

Engage with IEEE opportunity.

Enrich E&OC program with inclusion of suggested changes and enhancement.

Scheduled Events: TBD

BIARC Board minutes pending

Due to technical difficulties, the February minutes for the BIARC Executive Board will appear in next month's Hamgram, along with the minutes from the March meeting.

BIARC Education/Outreach Committee continues to extend reach

The Big Island Amateur Radio Club continued its outreach to the Puna Elementary Schools in conjunction with the Hawaii Science and Technology Museum through 2024 with nine schools reached through the Education and Outreach Committee. Our objective has been to introduce students, parents and teachers to the world of ham radio and to support further engagement through BIARC. Information is collected from those interested in obtaining ham training through local and online ham radio training programs. Doug, KH7DQ, continues to be the POC for obtaining such training.

Member participation in the E&OC Committee includes the following BIARC members:

Fred Fischer WH6HAA, David Miller KH6CZ, Joe Rosenbaum WH6JOE,
Jim Tatar WH6EMN, Mark Watanabe WH6FSA, and Les Hittner K0BAD,
Leigh Critchlow, WH6LC has been very active on the Repeater side.

We rely on the balance of the Club's membership to support outreach activity on the Kulani repeater. Events typically occur monthly and rotate through the different school locations. We have had very good participation from both the attendees and BIARC members. New ideas are being explored continually to help us engage more effectively and suggestions are welcome.

The E&OC is well equipped with access to the club's ft991a transceiver, VHF/UHF radios donated by members and FRS handhelds used by the students in attendance. Our supply of BIARC tri-fold flyers is maintained by Les, K0BAD, while Tony, WH6DVI, supplies our ARRL/ARES material.

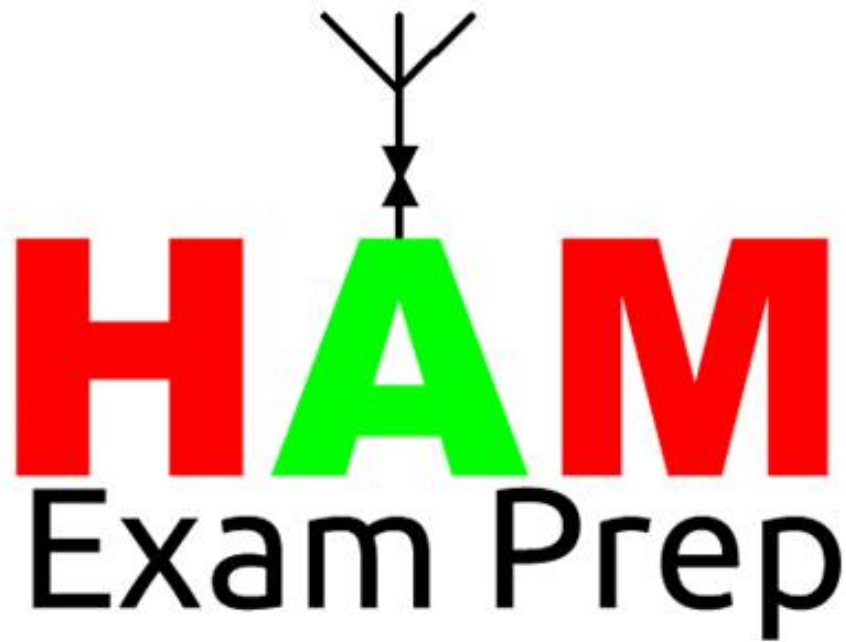
While prepared for most situations we are always looking for more support on the repeater side and plan to schedule half-hour segments for net operators who want to support our on-air activity.

Our outreach considers the requirements of the East Hawaii schools and groups. The school program has been oriented toward the elementary school community in conjunction with the Hawaii Museum of Technology and Science. However, during the summer, we also engaged with the YMCA in its Summer Activity program and this past month we were present at the Mountain View Elementary school through the Noir Lab and Communications, Education and Engagement, Gemini North. Our usual BIARC cadre is in action at any given time and location.

February 15, 2025

David Miller

Chair, BIARC Education and Outreach Committee



The next Technician License Preparation classes have been scheduled for April and May, says Doug Wilson (KH7DQ). Two classes will be offered. One will be held over a six-week period via Zoom and the other will be an accelerated in-person version. Both classes are free except for the \$15 exam fee at the end of each class.

Technician License Preparation Class via Zoom – April 9, 2025 to May 14, 2025 (6 weeks)

This class will be conducted twice-a-week for an hour each, over a six-week period via Zoom. Instructors will cover all of the questions in the Technician License question pool, explain each question-and-answer, and answer student questions. All materials will be provided, including all of the questions in the question pool and additional study materials and related references.

Accelerated Technician License preparation – May 17 & 18, 2025 (2 days)

This 2-day course is not for the *faint of heart*. It requires students to do considerable self-preparation work prior to the 2-day in-person class. This Includes taking multiple on-line practice exams, prior to the 2-day concentrated class sessions. During the in-person class sessions, the instructors will review all of the questions in the Technician License question pool, explain each question-and-answer, and answer student questions. This will be followed by a review of the presented materials prior to taking the exam on the second day.

Please contact Doug Wilson at douscelle@aol.com to sign-up for either or both classes.

ARRL's "On the Air Live" Continues to Grow



ARRL is equipping the next generation of radio amateurs with the knowledge to get active on the air. "On the Air Live" is a monthly interactive webinar series that does deep-dives into topics aimed at the new and intermediate ham. It complements material found in *On the Air* magazine. February's event had nearly 130 people in attendance.

The events are hosted by ARRL Education Specialist Wayne Greene, KB4SDF. "OTA Live" has seen rapid growth and good engagement in the two months it has been going.

"The most recent 'On the Air Live' covered programming a handheld radio, and we got a lot of good questions," said Greene. "Being an interactive webinar, we have the opportunity to spend time discussing things on which members need more information."

"On the Air Live" is accessed through the ARRL Learning Center at learn.arrl.org. It is a benefit of ARRL membership, and members must be logged into the web site to access it for live or archived sessions.

The next "On the Air Live" is Tuesday, March 25, 2025, at 8:00 PM Eastern. It will focus on advanced functions of handheld radios, including getting them on digital modes. "We're going to take the handheld radio and expand its capability by attaching it to a soundcard," said Greene. Those who attend will learn how to use APRS and VARA (including Winlink).

"We had a great time with members on the last one, and I hope more people will join us in March," said Greene.

In Brief...

How about some Pi with that ham radio? The [David Sarnoff Radio Club](#) (DSRC) in Princeton, New Jersey, will operate special event station N3P on "Pi Day," March 14, 2025. The event celebrates the March 14, 1879, birthday of Princeton's most famous resident, physicist Albert Einstein, best known for his equation $E = MC^2$, which states that energy and mass (matter) are the same thing in different forms. Why call it Pi Day? If you take the distance around a circle (circumference) and divide it by the distance across the circle (diameter), you always get the number 3.14, the value known as Pi, which also happens to be the date of Einstein's birthday. N3P will be using CW and SSB, two modes in existence during Einstein's lifetime: 14.031 (CW), 14.314 (USB), 7.031 (CW), and 7.227 MHz (LSB), from 2:00 PM to 9:00 PM EDT (1300-1900Z). The DSRC will also be monitoring the club repeater, 146.46, for local contacts. To receive a special event QSL card, send a self-addressed stamped business envelope along with your QSO information (call sign, state abbreviation, band, UTC time of contact) to Bob Uhrik, WA2BSP, 104 Knoll Way, Rocky Hill, NJ 08553.

YLRL Memorial Scholarships available for students

The Young Ladies Radio League (YLRL) has announced its Memorial Scholarship program for 2025. The scholarship program is aimed at female amateur radio operators studying radio, communications, electronics or amateur radio related arts and sciences.



There are three Memorial Scholarship award categories:

- The Ethel Smith, K4LMB, Memorial Scholarship — \$2,500 award
- The Mary Lou Brown, NM7N, Memorial Scholarship — \$2,500 award
- The Martha “Marte” Wessel, KØEPE, Memorial Scholarship — \$1,500 award

“YLRL is committed to investing in women in amateur radio, and we believe that every act of volunteerism through amateur radio, even a small one, helps turn the world into a better place,” said Vicki Zumwalt, N6KLS, president of YLRL.

“We hope that our scholarships will not only encourage students to learn more about science, technology, and engineering but also inspire them to take pride in being an amateur radio operator and to encourage others to do so as well.”

The YLRL believes that education in the fields of radio, communications, electronics, and amateur-related arts and sciences will play an important role in shaping the world’s future. Through these memorial scholarships, YLRL hopes to encourage female students to learn more about amateur radio.

To qualify, students must be female, have an amateur radio license, meet the requirements listed on the [YLRL website \(https://ylrl.net\)](https://ylrl.net) and apply using the online application. Applications are due by April 30, 2025. Winners will be announced in July 2025.



The Young Ladies Radio League (YLRL) is an international non-profit organization of female amateur radio enthusiasts. It was founded in 1939 and is the longest-running YL club in the world.

There are 14 YL Districts, including one for Youth and the District KL7 & KH6 for Alaska and Hawaii YLs.



Marlborough

Barbara Irby KC1KGS and Anne Manna WB1ARU staffing the YLRL booth at the New England HamXposition in Marlborough, MA September 2021



Batfish

Pictured: DeeDee N5DEE, Beth KC5RWW, Lynda KF5JUO, Judi N5KUO, Barb KD0WAW, Leah W3LEO, Mary AE6Q, Vonnice KE5RKC, Virginia NV5F, Patricia W5UBI, Michelle, W5MQC, Eva N5EVA

YLs gather together for special events, operating from World War II submarines, at Field Day, on DXpeditions and mobile operations. The Parks on the Air program has motivated hams to activate their local parks, and YLs have been a part of that, some using low power, simple portable antennas and CW (Morse code). Setting up a station outdoors using battery power helps stretch those ham radio *muscles* and gives you skills that would be needed in the event of an emergency.



YLs Teach — We have groups of ladies who teach YL-only amateur radio classes and administer VE testing sessions. Members run HF and Echolink nets which inform and educate others in proper on-air protocol, safety procedures and operation of equipment. ZOOM is a vehicle for YLs to gather together to practice their code speed, fine-tune their contest protocol or study together for a license upgrade. Setting up a CW station with a group of Girl Scouts is a great STEM project and shows young girls an alternate way of communication.

High school students visit Deep Space radio telescope

In late January, 17 students and staff members from Las Animas High School (LAHS) in Colorado visited the Deep Space Exploration Society Radio Telescope (DSES) located at the Plishner Radio Astronomy and Space Sciences Center near Haswell, Colorado.

They also got an introduction to amateur radio.

“This first field trip visit of high school students reflected the dreams of Michael Lowe, former DSES board president, who sought to create a center for radio astronomy and space science education in southeast Colorado,” said DSES President Myron Babcock, KL7YY.

Since 2009, society members have devoted hundreds of hours to rebuilding the Plishner site. In 2024, a grant from Amateur Radio Digital Communications (ARDC) provided funds to complete a new building suitable for hosting groups.

DSES board member Ray Uberecken, AAØL, and DSES member Roger Oakey, W3MIX, showed students how the big dish was controlled to track and focus on deep space objects as Earth revolves.

DSES Vice President Bill Miller, KCØFHN, gave an overview of the organization’s history and the years of effort required to revive the 60-foot-diameter radio telescope. He introduced radio astronomy and some of the studies DSES members have conducted since restoring the telescope, including detecting pulsars and masers, observing solar and planetary radio emissions, and map-



Students from Las Animas High School in Colorado get “hands-on” experience at the 60-foot-diameter Deep Space Exploration Society radio telescope.

[Photo courtesy of DSES]

ping the hydrogen line to show which galaxies are moving toward or away from Earth.

Students braved intense winds and cold to venture to the underground bunker location of the DSES amateur radio station, KØPRT. Board member Paul Sobon, NOØT, demonstrated how long-distance contacts are made using high-frequency (HF) transceivers. Under his supervision, several students learned to call CQ. Unfortunately, because band conditions were poor, no student got a response.

Later, Sobon was able to contact a radio amateur in the Canary Islands, and students observed two-way HF radio communication between stations over 5,000 miles apart.

About half the students who visited the site will participate in this year’s Colorado Science Olympiad competition.

Jennifer Pointon, Science Olympiad coach and LAHS counselor, said she wanted students to see the Plishner facilities and learn how DSES can provide opportunities for research and mentorship in astronomy, radio, electronics, and engineering.

The Deep Space Exploration Society is an all-volunteer group united by love for science, exploration, and learning about space. Its members include engineers (software, radio, electrical), professors, pilots, business owners, military veterans, construction workers, truck drivers, and amateur radio operators.

DSES welcomes new members. Student membership is free.